

SENIOR TRANSPORTATION OFFICERS QUALIFICATION COURSE

THROUGHPUT EVALUATION



THROUGHPUT EVALUATION

INITIAL PHASE

- ***INTRODUCTION OF UNIT EQUIPMENT***
- ***DEPENDS ON CAPABILITY TO DISCHARGE RORO AND BARGE CARRYING VESSELS***

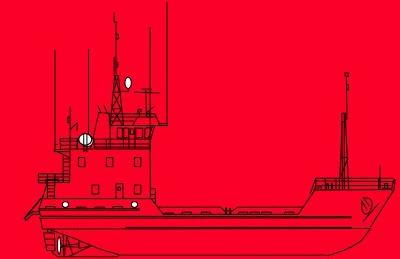


THROUGHPUT EVALUATION

INITIAL PHASE

- CONDITION OF TERMINAL
 - DISORGANIZED*
 - EARLY DEVELOPMENT STAGE*
 - UNABLE TO FULLY HANDLE*
 - LARGE NUMBERS OF SHIPS*

THROUGHPUT EVALUATION



TACTICAL RESUPPLY PHASE

- TERMINAL FACILITIES IMPROVED
- NEITHER TERMINAL OR LAND NET CAN HANDLE LARGE VOLUMES OF CONTAINERS
- UNIT MOVES DROPS OFF SIGNIFICANTLY

THROUGHPUT EVALUATION

SUSTAINED RESUPPLY PHASE

- TERMINAL WELL ORGANIZED
- THEATER AND TERMINAL HANDLES LARGE VOLUMES OF CONTAINERS
- AVAILABILITY OF FIXED PORT FACILITIES AND TYPES OF VESSELS AFFECT PORT CAPACITY

THROUGHPUT EVALUATION

STEPS IN OCEAN TERMINAL PLANNING

- DETERMINE THE TYPE OR CATEGORY OF EXISTING TERMINALS.
- ESTIMATE THE EXISTING TERMINAL THROUGHPUT CAPACITY.
- COMPUTE THE TERMINAL WORKLOAD NEEDED TO SUPPORT THE OPERATION.

THROUGHPUT EVALUATION

- DETERMINE THE REPAIR AND REHABILITATION REQUIRED
 - ESTIMATE MHE NEEDS
 - ESTIMATE THE UNITS, INDIVIDUALS, AND SUPERVISORY AND COMMAND ELEMENTS

FM 55-60 NEEDED TO OPERATE THE TERMINAL

THROUGHPUT EVALUATION

- TERMINAL RECEPTION CAPACITY

NUMBER OF BERTHS OR ANCHORAGE'S

BASED ON PHYSICAL FEATURES

EXPRESSED AS AN ESTIMATE OF
TONNAGE

IS A FUNCTIONAL OF WHARF AND
ANCHORAGE SIZE, WATER DEPTH,
AND VESSEL TRAFFIC

THROUGHPUT EVALUATION

- **TERMINAL DISCHARGE CAPACITY**
 1. BERTH CAPACITIES
 2. CAPACITY COMPUTATIONS
 3. INFLUENCES OF TRANSFER AND STORAGE OPERATIONS (*CAPACITIES*)

THROUGHPUT EVALUATION

- **TERMINAL CLEARANCE CAPACITY**
 1. **THE ABILITY TO CLEAR CARGO FROM THE TERMINAL**
 2. **CLEARANCE CAPACITY COMPUTATIONS:**
 - a. **RAIL CLEARANCE CAPACITY**
 - b. **HIGHWAY CLEARANCE CAPACITY**
 - c. **INLAND WATERWAY CAPACITY**

THROUGHPUT EVALUATION

- **LIMITING CAPACITY**

THE LESSER OF THE DISCHARGE, TRANSFER, OR CLEARANCE CAPACITY IS THE TERMINAL THROUGHPUT CAPACITY

1. **SIGNIFICANT INFLUENCE**
2. **OTHER FACTORS**

THROUGHPUT EVALUATION

- **STORAGE CAPACITIES**

INTRINSIC CAPACITY--- THE GROSS AMOUNT OF CONTAINERS, BREAKBULK, OR SQUARE FEET THAT CAN BE PLACED IN INTRANSIT STORAGE (100%)

THROUGHPUT EVALUATION

**OPTIMUM CAPACITY--- 55% OF THE
GROSS OR
INTRINSIC CAPACITY**

**CONGESTION BEGINS--- IN MILITARY PLANNING
CONGESTION STARTS WHEN THE CAPACITY AT
THE STORAGE SITE REACHES 60% OF THE INTRIN-
SIC CAPACITY OF THAT AREA**

**FULL CONGESTION--- IS THE POINT WHERE
CARGO
IN THE STORAGE AREA IS 80% OF THE GROSS
OR
INTRINSIC CAPACITY OF THE AREA**